extending longitudinal cutting element provided with a cutting edge running there around, and wherein the other roll is formed as a back-up roll and,

further wherein the nip has a variable width which approximates a height of at least one axially extending cross-cutting element or radially extending longitudinal cutting element or both, whereby said cutting elements join the back-up roller at least at one point of rotation thereof, thereby ensuring effective cutting of the polymer gel.--

Claim 17, line 1, delete "14" and insert therefor --24--.

Claim 18, line 1, delete "14" and insert therefor --24--,

line 2, delete "is planed or".

19. (Amended) The device of Claim [14] ~~24~~ 24, wherein the at least one axially extending cross-cutting element is arranged in parallel [or spindle-shaped] to [the] a longitudinal axis of the cutting roll ~~or cross-cutting roll~~.--

Claims 20, 21, and 23, line 1 of each, delete "14" and insert therefor --24--.

Please add the following new claim:

--25. The device of Claim 24, which is constructed to process a hydrous polymer gel having a thickness of from 3 to 500 mm.--

REMARKS

Claims 14-16 have been cancelled. Claims 17-21 and 23 have been amended. New Claim 24 and 25 have been added. Hence, Claims 17-25 are now active in this application.

REQUEST FOR RECONSIDERATION

Applicants wish to thank Examiner Dexter for the recent helpful and courtesy discussion conducted with their U.S. representative. In accordance with the remarks made during the discussion, Applicants have amended the claims to clarify the present invention. Now, in conjunction with and in addition to the remarks made during the discussion, Applicants wish to further distinguish the present invention from the cited references.

In accordance with the present invention, a device is provided for coarse grinding of hydrous polymer gels which permits surprisingly uniform and inexpensive size reduction of soft-viscoplastic or brittle polymer gels.

In particular, the present invention provides a device for processing hydrous polymer gel of variable thickness, the device containing two rolls which were approximately parallel to and aside each other and which are rotatable at opposite directions from each other and which have between them a nip for the passage of the polymer gel, wherein one roll is formed as a cutting roll which is provided with at least one axially extending cross-cutting element having a cutting edge and with a radially extending longitudinal cutting element provided with a cutting edge running around it, and wherein the other roll is formed as a back-up roll and further wherein the nip has a variable width,

which approximates a height of at least one axially extending cross-cutting element where radially extending longitudinal cutting element or both, whereby the cutting elements join the back-up roller at least at one point of their rotation, thereby ensuring effective cutting of the polymer gel.

Claims 14-16 and 18-20 stand rejected under 35 U.S.C. §102(b) as being anticipated by Heywood. However, this reference clearly fails to either disclose or suggest the present invention.

As noted previously, this reference merely describes a device for forming binder, fillers and wrappers for cigars. In contrast, the device of the present invention is used for processing a soft and plastic polymer gel with several advantages therefor. Further, several important differences are, again, noted between the present invention and Heywood.

First, in the present invention, the width of the roll gap approximates the height of the at least one axially extending cross-cutting element where radially extending longitudinal cutting element or both. This affords the important advantage that the cutting elements join the back-up roller at least at one point of their rotation, ensuring clean cutting of the polymer gel. Notably, the roll-gap is adjustable so as to meet differing demands, which means that the roll-gap may be dimensioned so that the longitudinal cutter on the cross-cutter with the cutting edge can be guided just along the back-up roll without contracting it. This is why polymer gels, such as band-locked gels with a layer of thickness in the range of 3 to 500 mm may be processed. This is clearly not possible for the device of the reference.

Further, in accordance with Heywood, the cutting roll and back-up roll are coupled to compulsory fashion and, clearly, this mode of drive is not used in the present invention. By contrast, the present invention utilizes a belt transport to transport the polymer material for feeding in to the nip between the back-up roll and the cutting roll. However, the back-up roll and the cutting roll are independent from each other. Hence, it is possible that the rotational

speed of the longitudinal cutter is higher than the conveying rate of the polymer gel to avoid congestion. This is not possible for the driving mechanism of Heywood.

Hence, this ground of rejection is believed to be unsustainable and should be withdrawn.

Claim 17 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Heywood.

However, in view of the above remarks, this ground of rejection is also believed to be unsustainable and should be withdrawn.

Claims 21-23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Heywood in view of Stream. However, Stream fails to correct the deficiencies of the former cited reference.

Hence, this ground of rejection is believed to be unsustainable and should be withdrawn.

Claim 14-23 stand rejected under 35 U.S.C. §112, second paragraph.

However, in view of the above amendments, this ground of rejection is believed to be moot.

Figures 1-3 stand objected to for the reasons set forth at page 2 of the Official Action.

Pursuant to this objection, Applicants enclose herewith proposed drawing corrections.

Accordingly, in view of all of the above amendments, attendant remarks and discussion with Examiner Dexter, it is believed that the present application now stands in condition allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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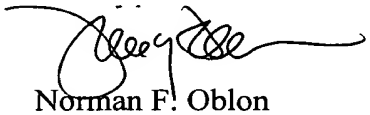

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